

Edaphologia, No. 41: 1-10. September 25, 1989

Notes on the Ants of the Genus *Hypoponera* in Japan (Hymenoptera : Formicidae) *

Keiichi ONOYAMA

Laboratory of Wildlife Resource Ecology, Obihiro University of Agriculture
and Veterinary Medicine, Inada-cho, Obihiro 080, Japan

Abstract The ants of *Hypoponera* in Japan are preliminarily revised and redescribed. *H. bondroiti* (FOREL) comb. nov., *gleadowi* (FOREL), and *sauteri* (FOREL) comb. et stat. nov. are new to Japan. The identities of *H. nippona* (SANTSCHI) and *excoecata* (WHEELER) are clarified. The latter is excluded from the Japanese fauna.

Introduction

Ants of the genus *Hypoponera* are abundant in litters and soils from central Honshu to the southern parts of the Ryukyu Islands. Despite the abundance of species and population, the taxonomy of *Hypoponera* species in Japan has not been revised. Only one species, *H. excoecata* (WHEELER), which OGATA (1987) recently transferred to *Hypoponera* from originally described genus *Ponera*, has been often recorded from many localities (e. g. SONOBE, 1973, 1977; MORISITA & ONOYAMA, 1974). However, the most common species in Honshu has the antennal scapes not reaching the occipital border. This character differs from the character described in WHEELER's original description of *H. excoecata*. Examination of types of *Hypoponera* species has revealed that our identification of *H. excoecata* is erroneous. WHEELER (1928a) himself recorded *H. excoecata* from Japan, but I have found also his determination to be erroneous. *H. excoecata* is therefore excluded from the Japanese fauna for the present. Also clarified are the identities of *H. nippona* (SANTSCHI), *sauteri* (FOREL), and *gleadowi* (FOREL). The last two are new to Japan. I have identified the most common species as *sauteri*, instead of our former *excoecata*. The records of *excoecata* are accordingly *sauteri*, or in some cases may be *nippona* if the specimens have antennal scapes reaching or surpassing the occipital corners. *H. bondroiti* (FOREL), new to Japan, is also added here. ONOYAMA (1980) recognized six species for *Hypoponera* from Japan. Recently MORISITA *et al.* (1988) have recorded *H. opaciceps* from Okinawa Island. In my present calculation, having excluded *H. excoecata*, at least eight species of *Hypoponera* live in Japan: *bondroiti*, *gleadowi*, *nippona*, *opaciceps*, *sauteri*, *zwaluwenburgi*, and two undetermined species.

* Taxonomy and ecology of the ants of Japan, (3)

Measurements and Indices

Head length (HL): Maximum dorsal full-face view length from anteriormost margin of clypeus to posterior margin of occiput.

Head width (HW): Maximum dorsal view distance across head excluding eyes (including eyes in males).

Cephalic index (CI): $HW/HL \times 100$.

Scape length (SL): Length of scape excluding radicle.

Scape index (SI): $SL/HW \times 100$.

Eye diameter (ED): Maximum diameter of eye.

Width of frontal lobes (FW): Maximum width between the right and left outermost margins of frontal lobes in dorsal view.

Pronotal width (PW): Maximum width of pronotum in dorsal view.

WEBER's length of trunk (WL): Maximum diagonal distance from base of anterior slope of pronotum (namely excluding cervix) to metapleural lobe (=inferior propodeal plate).

Petiolar node length (PNL): Lateral view distance from the midpoint where anterior face of node meets anterior peduncle to that where posterior face of node meets posterior peduncle.

Petiole width (PtW): Maximum width of petiolar node in dorsal view.

TAYLOR's height of petiole (TPH): Maximum height of petiole in side view from summit of node to extreme lowermost part of subpetiolar process (TAYLOR, 1967).

Postpetiole width (PPW): Maximum width of postpetiolar node in dorsal view.

All measurements are represented in 1/100 mm.

Abbreviations for museum names are as follows.

MCZ: Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA.

MHNG: Muséum d'Histoire Naturelle, Geneva, Switzerland.

NMB: Naturhistorisches Museum, Basel, Switzerland.

Hypoponera bondroiti (FOREL) comb. nov.

(Figs. 1 and 6)

Ponera ergatandria subsp. *Bondroiti* FOREL, 1911: 285. Worker, female, ergatomorphic male. Type locality: Botanischen Garten in Brüssel (BONDROIT leg.).

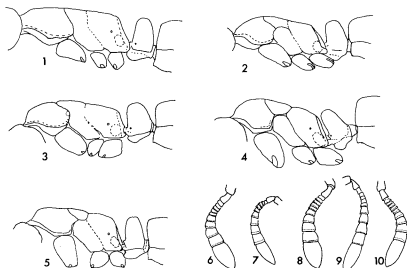
[1 syntype worker and 1 female in NMB examined.]

Ponera bondroiti; SANT'SCHI, 1937: 364-365, figs. 2 & 5. Worker.

Worker. HL 60-65 (65-68), HW 51-55 (55-58), CI 81-90 (85), SL 39-43 (43-44), SI 74-83 (74-80), ED 2-3 (7-8), FW 12-14 (13-14), PW 37-39 (43-44), WL 78-82 (84-94), PNL 16-19 (18-20), PtW 26-27 (30-32), TPH 33-36 (36-42), PPW 41-46 (53-54) (7 plus 2 gynecoid workers (in parentheses) measured).

Mandibles with three larger teeth occupying apical 1/3 of masticatory margin, followed by an irregular series of 7-9 indistinct minute denticles. Clypeus slightly produced anteromedially. Head rectangular, with convex sides, slightly narrower anteriorly than posteriorly; occipital border concave. Antennal scapes failing to reach the occipital corners by their thickness. Antennal club 5-segmented; funiculi VIII to X much wider than

long, apical segment slightly longer than the three preceding segments together. Eyes with 2-3 ommatidia (12-13 in gynecoid workers), blackish, situated near the posterior border of clypeus, or at $0.79-0.83\times$ the distance from lateral occipital border to midpoint of anterior genal border. Promesonotal and metanotal sutures distinct. Lateral mesonotal suture absent. Propodeal dorsum trapezoidal and flat or slightly convex, rounded posteriorly.



Figs. 1-10. Trunk and petiole in lateral view (Figs. 1-5) and antenna (Figs. 6-10) of the workers of *Hypoponera* species. 1, 6: syntype of *bondroitii* (FOREL). 2, 7: holotype of *excoecata* (WHEELER). 3: syntype of *gleadowi* (FOREL). 8: syntype gynecoid worker of *gleadowi* (FOREL). 4, 9: syntype of *nippona* (SANTSCHI). 5, 10: syntype of *sauteri* (FOREL).

Posterolateral corners of propodeum rounded, without carinae. Petiolar node short, high, and wide; anterior and posterior faces in profile slightly converging dorsad; posterior border seen from above convex; dorsal face of petiole slightly convex and flat in a small area. Anterior paired teeth of petiolar node small but sharply pointed. Subpetiolar process moderately developed, ventral margin in profile gently, convexly curved. Mandibles, clypeus, trunk, and petiole smooth except hair pits, head and gaster punctulate. Erect to suberect pilosity sparse on mandibles, clypeus, antennal scapes, truncal dorsum, petiolar dorsum, entire gaster, coxae, and femurs. Yellowish decumbent to appressed pubescence abundant on the whole body and appendages. Light to medium brown; mandibles, clypeus, petiole, and appendages more yellowish.

Two workers with large eyes consisting of 12-13 ommatidia were found. These gynecoid workers have greater dimensions than the normal worker, and their postpetioles are about as wide as that of the syntype female (PPW=0.51 mm).

Material examined. <Hokkaido>: 8 workers, Sunayu, Lake Kussharo, Kushiro Region, 120 m alt., under litters on and in warm soils near hot springs, 7-VIII-1985, K. ONOYAMA leg. <Ogasawara Isls.>: 1 worker, Chichi-jima, 30-VII-1972, M. TANAKA leg.

Remarks. Large size, short antennal scapes, absence of lateral mesonotal suture, and rounded posterolateral corners of propodeum are the features of this species. SANTSCHI (1937) recorded this species from Taiwan. *H. bondroitii* may be a synonym of *H. punctatissima* (ROGER), the identity of which is unknown to me. It is very interesting that the two localities reported here are far apart from each other; Hokkaido is in the subarctic zone, whereas Ogasawara is in the subtropical. I could not find any significant difference between specimens from these two localities.

Hypoponera excoecata (WHEELER)

(Figs. 2 and 7)

Ponera excoecata WHEELER, 1928b: 7-8. Worker. Type locality: Taip6, China (1 worker, F. SILVESTRI leg.). ["Cotype" [holotype] worker in MCZ examined.]

Hypoponera excoecata; OGATA, 1987: 123. [Generic transfer. His figures 113 and 114 named as *excoecata* are not of *excoecata*.]

Not *Ponera excoecata*; WHEELER, 1928a: 99. [1 worker specimen in MCZ examined.]

Worker. HL 51, HW 41, CI 80, SL 39, SI 95, ED 1, FW 9, PW 31, WL 70, PNL 15, PtW 21, TPH 29, PPW 34 (holotype measured).

Mandibles long and triangular, external margin slightly concave at the basal 1/3, masticatory margin with 9 teeth, apical acute and long, the 3rd, 5th, and 6th large and subequal in size, basal a little smaller than these, the 2nd, 4th, 7th, and 8th small (this description is based on the left mandible, the right is concealed but seems somewhat different from the left). Head rectangular, about 1/4 longer than wide, a little narrower anteriorly than posteriorly, with sides evenly rounded and moderately convex; occipital border slightly and broadly concave, occipital corner rounded. Frontal carinae not raised, lobes separated by a shallow and very narrow but distinct furrow, which extending back a little before the middle of the head. Clypeus as long as frontal lobes; anterior margin broadly convex, in profile dorsal outline evenly rounded and slightly convex; median tooth absent. Antennal scapes long, thickest at the distal 1/3 point in full face view, just reaching the occipital corners, and barely surpassing the median occipital border; club 5-segmented, funiculus VII indistinctly club-shaped. Funiculi slightly enlarged apically; funiculus I twice as long as wide, II 1.3 times as wide as long, III to VI twice as wide as long, VII slightly longer than wide, VIII to X as long as wide, XI (apical) 2.4 times as long as wide, apical segment a little shorter than VIII to X together. Eyes with a small indistinct ommatidium, situated at $0.75\times$ the distance from lateral occipital border to midpoint of anterior genal border. Dorsal outline of pro- and mesonotum together forming a convex arch, slightly interrupted by promesonotal suture. Metanotal suture only slightly impressed. Lateral mesonotal suture distinct and dark brown. Metanotal groove moderately deep laterally. Propodeal dorsum in profile nearly straight, rounded posteriorly. Propodeal dorsum and declivitous face are in profile subequal in length. Declivitous face flat. Posterolateral corners of propodeum angulate, with an angle of 90° seen from above, but without a dark-colored line. In dorsal view, pronotum 1.3 times as wide as long, mesonotum 1.3 times as wide as long, propodeal dorsum 2.5 times as long as wide. Petiolar

node narrowed above, the summit rounded, and also rounded at anterior and posterior borders. Subpetiolar process moderately large, probably anteriorly developed (unobservable), triangular in profile, with no concavity posteriorly. Petiolar node from above semicircular, rounded anteriorly and straight posteriorly. Anterior paired teeth small, not much protruding anteriorly. Postpetiole in dorsal view slightly longer than wide, 2nd gastral tergite as wide as or slightly wider than long. Mandibles with a few scattered punctures. Head to gaster densely punctulate. Body subshining, thorax and petiolar dorsum more shining; declivitous face and posterior face of petiole almost smooth and shining. Short appressed white-yellow pubescence moderately abundant on the body; no erect hairs except for dorsa of mesonotum and postpetiole, which having only a few erect short hairs. Antennal scapes in a view parallel to funicular flexion plane with several short subdecumbent hairs and much appressed pubescence. Brownish yellow, antennal funiculi and legs lighter.

Remarks. Since Japanese students have not had the identity of *excoecata*, the detailed description has been given above. This species is different from *nippona* in the shape of truncal dorsum which is not interrupted by metanotal suture and in having sparser hairs on the trunk. No specimen was found among my collection. All of the records from Japan are doubtful. *H. excoecata* is therefore excluded from the Japanese fauna until a reliable record may be published.

Hypoconera gleadowi (FOREL)

(Figs. 3 and 8)

Ponera Gleadowi FOREL, 1895: 292-293, nota, figs. 17a-c. Worker, male. Type locality: Poona, India. [3 syntype workers and 1 male in MHNG examined.]

Ponera gleadowii; FOREL, 1900: 327. Female, male.

Ponera gleadowi; WILSON, 1958: 328.

Hypoconera gleadowi; TAYLOR, 1967: 12. [Generic transfer.]

Ponera gleadowii r. *decepiens* FOREL, 1899: 118. Worker. Type locality: Kauai, Hawaii. [Synonymy by WILSON, 1958: 329. 1 syntype worker in MHNG examined and WILSON's synonymy confirmed. See WILSON & TAYLOR, 1967: 29.]

Ponera japonica r. *formosae* FOREL, 1913: 186. Worker. Type locality: Anping, Taiwan. [Synonymy by TAYLOR, 1967: 76.]

Hypoconera sp. A ONOYAMA, 1976: 128. [Specimens examined.]

Not *Ponera gleadowii*; AZUMA, 1952: 2, 1953: 1.

Worker. HL 57-60 (63), HW 45-49 (51), CI 75-81 (81), SL 36-39 (40), SI 77-87 (78), ED 2-3 (7), FW 12-14 (-), PW 33-36 (40), WL 71-79 (81), PNL 17-19 (19), PtW 21-23 (26), TPH 28-31(33), PPW 35-40 (45) (13 plus 1 gynecoid worker (in parentheses) measured).

Mandibles with three larger denticles occupying apical a little more than 1/3 portion of masticatory margin, followed by 5-8 irregular smaller or minute denticles. Antennal scapes failing to reach the occipital corners by 1.5 or more their maximum thickness; funicular segments thickened towards apex, all segments wider than long except the apical segment; funiculus X 1 1/3 times wider than long, apical longer than the preceding two together. Antennal club 5 segmented. Eyes with 1-3 ommatidia (12 in a gynecoid worker), situated near the posterior clypeal margin, 0.82-0.84× the distance from lateral occipital border to anterior genal border. Head rectangular, sides almost parallel, a little wider

posteriorly than anteriorly. Occipital margin concave. Posterolateral corners of pronotum a little raised. Promesonotal suture distinct. No lateral mesonotal suture present, but a fine furrow present in some specimens. Metanotum a little constricted. Propodeal dorsum flat and almost rectangular, rounded posteriorly. Posterolateral corners of propodeum rounded. Petiolar node long and low, dorsal face convex. Subpetiolar process in profile roughly triangular. Entire body smooth and subshining except hair pits which resuspend punctulation, mandibles more shining. Erect pilosity sparse on clypeus, occiput, truncanal dorsum, petiolar dorsum, and gaster. Yellowish short appressed or decumbent pubescence abundant on the body and appendages except mandibles which bear sparsely decumbent pilosity.

Material examined: <Ishigaki Is.>: 23 workers, Miyarabashi, 2 m alt., in sandy soil in a *Albizia julibrissin* forest, 15-III-1975, K. ONOYAMA leg. <Iriomote Is.>: 8 workers, at the beginning of Iriomote Traverse Road, west of Ootomi, 50 m alt., 5-VII-1974, K. ONOYAMA leg.; 9 workers, Oohara, 10 m alt., 4-VII-1974, K. ONOYAMA leg.

Remarks: *H. gleadowi* resembles *sauteri*, but differs in having larger size, thicker petiole, wider head, propodeum with rounded posterolateral corners, and wider propodeal dorsal face. *H. gleadowi* also resembles *bondroiti*, but distinguished by its smaller size (HW < 50) and long and low petiole.

Although WILSON & TAYLOR (1967: 29) provisionally synonymized *Ponera gleadowi* r. *decipiens* with *punctatissima*, a *decipiens* syntype has longer petiole and is surely *gleadowi*.

The early records of *gleadowi* from Japan were made by AZUMA (1952, 1953). Later in his revised report (AZUMA, 1977), he applied *H. excoecata* instead of *gleadowi*, judging from the same locality (Ooike).

Hypoponera nippona (SANTSCHI)

(Figs. 4 and 9)

Ponera nippona SANTSCHI, 1937: 364-366, figs. 3-4. Worker. Type locality: Aoshima, Kiu-Shiu, Japon (3 workers, III-1924, K. SATO leg.). [3 syntype workers in NMB examined.]

Hypoponera nippona; OGATA, 1987: 123. [Generic transfer.]

Hypoponera sp. B ONOYAMA, 1976: 128. [Specimens examined.]

Worker. HL 54-60, HW 44-49, CI 79-85, SL 42-46, SI 88-98, ED 1-2, FW 10-12, PW 34-38, WL 71-80, PNL 15-17, PtW 20-26, TPH 31-35, PPW 36-42 (9 measured).

Mandibles long and triangular, with 8-9 teeth, five of apical six or seven teeth larger. Anterior clypeal margin broadly convex. Head rectangular, with convex sides, slightly narrower anteriorly than posteriorly, occipital border concave. Antennal scapes just reaching or slightly surpassing the occipital corners. Antennal club 5-segmented; funiculi VIII to X longer than wide, apical nearly as long as the preceding three together. Eyes with 1 indistinct ommatidium, situated a little apart from the posterior border of clypeus, or at $0.73-0.77 \times$ the distance from lateral occipital border to midpoint of anterior genal border. Promesonotal, metanotal, and lateral mesonotal sutures distinctly impressed. Metanotal groove deep laterally. Propodeal dorsum narrow and convex, rounded posteriorly. Posterolateral corners of propodeum angulate but without a colored line. Dorsal face of petiole convex. Subpetiolar process in profile roughly triangular with a concavity posteriorly. Mandibles, clypeus, trunk, and petiole almost smooth and shining, head

dorsum and gaster punctulate. Erect to suberect pilosity sparse on mandibles, clypeus, antennal scapes, truncal dorsum, petiolar dorsum, entire gaster, and coxae. Yellowish decumbent to appressed pubescence abundant on the whole body and appendages. Color brownish yellow, gaster slightly darker; mandibles, clypeus, and appendages yellow.

Material examined. <Kyoto Pref.>: 3 alate females, Tanaka-takahara-cho, Sakyo-ku, Kyoto, 25-VIII-1973, M. HORI leg.; 3 alate females, 9 males, Kyoto University, Kitashirakawa-oiwake-cho, Sakyo-ku, Kyoto, 25-VIII-1973, K. ONOYAMA leg. <Osaka Pref.>: 1 worker, Souji, Takatsuki, 10 m alt., 9-VII-1975, K. ONOYAMA leg. <Kochi Pref.>: 1 worker, Kochi Park, Kochi, 12-V-1984, M. MORISITA leg. <Miyazaki Pref.>: 3 workers, Aoshima, III-1924, K. SATO leg. <Okinawa Is.>: 1 worker, Oku, Kunigami-son, 4-VIII-1974, T. ABE leg.; 1 worker, Shioya, 28-VI-1982, M. MORISITA leg.; 2 workers, Nishihara, 6-I-1976, T. ABE leg. <Iriomote Is.>: 1 worker, Iriomote Traverse Road, several km west-northwest of Ootomi, in the soil under stone, 5-VII-1974, K. ONOYAMA leg.

Nuptial flight. Three alate females flew into a room towards the light between 0:00 and 1:00 a.m. on August 25. Between 3:20 and 5:05 a.m. on the same day, three females and nine males in twos and threes came to a fluorescent lamp on a desk of a room on the 3rd floor of the University Building. They flew up and down around the lamp. Although I have not yet obtained females associated with workers in a nest, I determine these alate females (and accordingly males) as *nippona*, because these females have yellowish body color, long scapes, and the shape of subpetiolar process similar to that of the worker of *nippona*.

Hypoconera sauteri (FOREL) comb. et stat. nov.

(Figs. 5 and 10)

Ponera Gleadowi R. *decipiens* v. *Sauteri* FOREL, 1912: 48-49. Type locality: Pilam, Taiwan (H. SAUTER leg.). [2 syntype workers and 1 dealate female in MHNG examined.]

Ponera excoecata; WHEELER, 1928a: 99. [Misidentification. 1 worker specimen in MCZ examined.]

Hypoconera excoecata?; ONOYAMA, 1976: 128. [Specimens examined.]

Worker. HL 49-59, HW 37-43, CI 74-78, SL 34-40, SI 86-93, ED 1-2, FW 9-10, PW 29-35, WL 61-75, PNL 13-15, PtW 19-24, TPH 28-33, PPW 32-41 (12 measured).

Mandibles with three larger teeth occupying apical 1/3 of masticatory margin, followed by 8-9 denticles, the apical 5th a little smaller than the 3rd. Anterior clypeal margin broadly convex. Head narrow, with slightly convex sides, a little narrower anteriorly than posteriorly; occipital border slightly concave. Antennal scapes failing to reach the occipital corners by their thickness. Antennal club 5-segmented; funiculi VIII to X much wider than long, apical longer than the preceding three together. Eyes with a minute unpigmented, hence indistinct ommatidium, situated at $0.71-0.76 \times$ the distance from lateral occipital border to midpoint of anterior genal border. Promesonotal, metanotal, and lateral mesonotal sutures finely impressed. Metanotal groove shallow laterally. Propodeal dorsum narrow and convex, rounded posteriorly. Posterolateral corners of propodeum carinate at least at the lower half. Petiolar node short, anterior and posterior faces in profile narrowed dorsad. Dorsal face of petiole convex. Mandibles, clypeus, trunk, and petiole almost smooth and shining, head dorsum and gaster punctulate. Erect to suberect pilosity very sparse on clypeus, truncal dorsum, petiolar dorsum, gaster, and

coxae. Yellowish decumbent to appressed pubescence abundant on the whole body and appendages. Brownish yellow to medium brown, mandibles and appendages lighter.

Material examined. (Izu Is.) : 2 workers, Ooshima Natural Park, Izu Oshima, 100 m alt., 26-XI-1974, K. ONOYAMA leg.; 1 worker, north of Sashikichi, Izu Oshima, 80 m alt., 28-XI-1974, K. ONOYAMA leg. (Kanagawa Pref.) : 1 alate female, 1 worker, Manazurumisaki, 60 m alt., 7-I-1973, K. ONOYAMA leg. (Shizuoka Pref.) : 2 workers, Yamanaka, Mishima, 550 m alt., 6-I-1974, K. ONOYAMA leg.; 1 worker, Shizunami, 12-VIII-1975, K. ONOYAMA leg. (Aichi Pref.) : 5 workers, Mt. Ooyama, Irako Peninsula, 150 m alt., 20-X-1973, K. ONOYAMA leg. (Kyoto Pref.) : 1 female, 1 worker, Kanmuri-jima, Maizuru Bay, 10 m alt., 17-VIII-1974, K. ONOYAMA leg.; 1 worker, Ashuu, 18-IX-1974, T. MARUYAMA leg.; 2 workers, Kamigamo, Kyoto, 110 m alt., 2-V-1973, K. ONOYAMA leg.; 2 workers, Botanical Garden of Kyoto University, Sakyo-ku, Kyoto, 70 m alt., 1-IV-1973, K. ONOYAMA leg. (Hyogo Pref.) : 1 female, Tegarayama, Himeji, 20 m alt., 1-XII-1975, K. ONOYAMA leg. (Nara Pref.) : 6 alate females, 2 workers, below Futatsuishi, Mt. Omine, 1000 m alt., 12-X-1973, K. ONOYAMA leg. (Wakayama Pref.) : 2 workers, Hatake-jima, Shirahama, 0 m alt., 1-XI-1973, K. ONOYAMA leg.; 3 workers, Shiono-misaki, 20 m alt., 30-X-1973, K. ONOYAMA leg. (Hiroshima Pref.) : 1 worker, Hiroshima, 30-III-1985, K. ONOYAMA leg. (Tsushima Is.) : 1 worker, Oura Forest Road, 170 m alt., 30-III-1978, K. ONOYAMA leg.; 1 female, 1 worker, Mt. Tatsura, 130 m alt., 31-III-1978, K. ONOYAMA leg.; 1 worker, Tsutsu-zaki, 40 m alt., 30-III-1978, K. ONOYAMA leg. (Iki Is.) : 1 female, 1 worker, Tushoku, 60 m alt., 3-IV-1978, K. ONOYAMA leg.; 2 workers, Sumiyoshi-jinja, 50 m alt., 3-IV-1978, K. ONOYAMA leg.; 1 female, 1 worker, Gakunotsuji, 120 m alt., 28-III-1978, K. ONOYAMA leg.; 1 worker, Haze-jinja, 20 m alt., 28-III-1978, K. ONOYAMA leg. (Kumamoto ? Pref.) : 1 worker, Otsu, 17-VII-1925, F. SILVESTRI leg. (Okinawa Is.) : 3 workers, Mt. Nishime, 360 m alt., 4-III-1984, K. ONOYAMA leg.; 2 workers, Fuku Bridge, 120 m alt., 28-VI-1974, K. ONOYAMA leg.; 2 workers, Hichi, 100 m alt., 2-III-1984, K. ONOYAMA leg.; 2 workers, Izumi, 27-VII-1974, K. ONOYAMA leg. (Ishigaki Is.) : 1 worker, Yashirin, 100 m alt., 17-III-1975, K. ONOYAMA leg.; 1 worker, Mt. Omotodake, 130 m alt., 2-VII-1974, K. ONOYAMA leg. (Iriomote Is.) : 1 worker, west of Funaura, 40 m alt., 19-III-1975, K. ONOYAMA leg.; 1 worker, northwest of Ootomi, 200 m alt., 5-VII-1974, K. ONOYAMA leg.; 1 female, 1 worker, west of Toyohara, 10 m alt., 3-VII-1974, K. ONOYAMA leg.

Remarks. Japanese students have been erroneously identified this small, widely distributed species with short antennal scapes as *excoecata* as WHEELER (1928a) did. *H. sauteri* is characteristic in having small size, wider than long funiculi VIII-X, 1 faceted, unpigmented eyes, and propodeum with carinated posterolateral corners. Another characteristic is the size of the female, which is only a little larger than the worker.

Acknowledgments

I would like to acknowledge the following persons for their kind help for the loan of types: Dr. Cesare BARONI URBANI of Naturhistorisches Museum, Basel, Switzerland; Dr. Claude BESUCHET of Muséum d'Histoire Naturelle, Geneva, Switzerland; Dr. Stefan P. COVER, Dr. Scott R. SHAW, and Dr. Edward O. WILSON of Museum of Comparative Zoology, Harvard University, Cambridge, USA; Dr. William L. BROWN of Cornell University, Ithaca, USA. My thanks are also due to Dr. Masaaki MORISITA, Kyoto, Dr. Takuya ABE of Kyoto University, Mr. Masahiro TANAKA, Tokyo, Dr. Michio HORI of Wakayama

Medical College, and Mr. Takashi MARUYAMA of Tokyo University of Fisheries, for their gift or loan of material.

摘 要

小野山敬一 (帯広畜産大学野生動物管理理学研究室): 日本産ニセハリアリ属の蟻類.

Edaphologia, No. 41: 1-10. 1989

日本産ニセハリアリ属 *Hypoponera* の蟻について検討し、5種を再記載した。*H. bondroiti* (FOREL) トビニセハリアリ (新称)、*gleadowi* (FOREL) フシナガニセハリアリ (新称)、*sauteri* (FOREL) ニセハリアリを日本から新しく記録した。*H. nippona* (SANTSCHI) ヒゲナガニセハリアリと *excoecata* (WHEELER) の正体を明らかにし、以前の記録の同定に疑問のある *H. excoecata* を日本の蟻相から除外した。

References

- AZUMA, M., 1952. Notes on the participation in scientific research of Kitayama-kyō, Kii Prov. Kōyō, (4): 1-7. (In Japanese)
- AZUMA, M., 1953. On the myrmecological-fauna of Mt. Rokko, Hyogo-Pre. (Formicidae, Hymenoptera). *Warena*, (2): 1-7. (In Japanese)
- AZUMA, M., 1977. On the myrmecological-fauna of Mt. Rokko, Hyogo, with description of a new species (Formicidae, Hymenoptera). *Hyogo Biology*, 7: 112-118. (In Japanese)
- FOREL, A., 1895. In: EMERY, C., *Sopra alcune formiche della fauna mediterranea*. *Mem. R. Acc. Sci. Bologna, Ser. V*, 5: 291-307, 1 tav.
- FOREL, A., 1899. *Heterogyna* (Formicidae). *Fauna Hawaiensis (Honolulu)*, 1: 116-122.
- FOREL, A., 1900. Les formicides de l'empire des Indes et de Ceylan. Part VII. *J. Bombay Nat. Hist. Soc.*, 13: 303-332.
- FOREL, A., 1911. Ameisen des Herrn Prof. v. IHRING aus Brasilien (Sao Paulo usw.) nebst einigen anderen aus Südamerika und Afrika. (Hym.). *Deutsch. Ent. Zeitschr.*, (1911): 285-312.
- FOREL, A., 1912. H. SAUTER's Formosa-Ausbeute. Formicidae (Hym.). *Ent. Mitt.*, 1: 45-61, 67-81.
- FOREL, A., 1913. H. SAUTER's Formosa-Ausbeute: Formicidae II. *Arch. Naturg. (A)*, 79: 183-202.
- MORISITA, M. AND K. ONOYAMA, 1974. The ants of Kyoto Prefecture. In: *The Fauna of Kyoto Prefecture, Japan* (MORISITA, M., ed.), pp. 31-40. Kyoto Prefectural Government. (In Japanese)
- MORISITA, M., KUBOTA, M., ONOYAMA, K., OGATA, K., TERAYAMA, M., KONDOH, M., IMAI, H. T., YAMAUCHI, K. AND K. MASUKO (eds.), 1988. A list of the ants of Japan with common Japanese names. 50pp. The Myrmecologists Society (Japan). (In Japanese)
- OGATA, K., 1987. A generic synopsis of the poneroid complex of the family Formicidae in Japan (Hymenoptera). Part I. Subfamilies Ponerinae and Cerapachyinae. *Esakia*, (25): 97-132.
- ONOYAMA, K., 1976. A preliminary study on the ant fauna of Okinawa-Ken, with taxonomic notes (Japan; Hymenoptera : Formicidae). In: *Ecological Studies of Nature Conservation of the Ryukyu Islands, (II)* (IKEHARA, S., ed.), pp. 121-141. University of the Ryukyus.
- ONOYAMA, K., 1980. An introduction to the ant fauna of Japan, with a check list (Hymenoptera, Formicidae). *Kontyū*, 48: 193-212.
- SANTSCHI, F., 1937. Fourmis du Japon et de Formose. *Bull. Ann. Soc. Ent. Belg.*, 77: 361-388.
- SONOBE, R., 1973. Ant fauna of the Kinkasan Island. In: *Research Report for the Fiscal Year of 1972 of "The Survey of Animal Communities and the Study of Nature Preservation in Terrestrial Ecosystems"* (KATO, M., ed.), pp. 178-183. (In Japanese with English summary)
- SONOBE, R., 1977. Ant fauna of Miyagi Prefecture, Japan. *Jpn. J. Ecol.*, 27: 111-116.

- TAYLOR, R. W., 1967. A monographic revision of the ant genus *Ponera* LATREILLE. *Pac. Ins. Mon.*, **13**: 1-112.
- WHEELER, W. M., 1928a. Ants collected by Professor F. SILVESTRI in Japan and Korea. *Boll. Lab. Zool. Gen. Agrar. Portici*, **21**: 96-125.
- WHEELER, W. M., 1928b. Ants collected by Professor F. SILVESTRI in China. *Boll. Lab. Zool. Gen. Agrar. Portici*, **22**: 3-38.
- WILSON, E. O., 1958. Studies on the ant fauna of Melanesia III. *Rhytidoponera* in western Melanesia and the Moluccas. IV. The tribe Ponerini. *Bull. Mus. Comp. Zool. Harvard*, **119**: 303-371.
- WILSON, E. O. AND R. W. TAYLOR, 1967. The ants of Polynesia (Hymenoptera : Formicidae). *Pac. Ins. Mon.*, **14**: 1-109.